

Practice ITBS Test

Math Concepts and Math Estimation

Part 1: Math Concepts

Directions:

This is a test of how well you understand the number system and the terms and operations used in math.

Four answers are given for each question. You are to choose the answer that you think is better than the others.

Then, on your answer sheet, find the row of answer spaces numbered the same as the question. Fill in the answer space for the best answer.

The sample on this page shows you what the questions are like and how to mark your answers.

SAMPLE

S1 Which shape is a triangle?

- A ■
- B ●
- C ▲
- D ◆

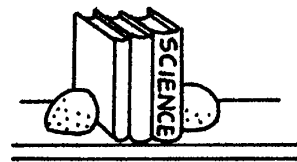
ANSWER

S1 A B C D

1 Which of these would most likely be measured in milligrams?

- A The weight of a car
- B The weight of an elephant
- C The weight of a paperclip
- D The weight of a couch

2



Dave has three books to arrange on his bookshelf, a math book, a history book, and a science book. The science book must be the book farthest to the right. **How many different ways can Dave arrange his math book and his history book?**

- J 4
- K 3
- L 2
- M 1

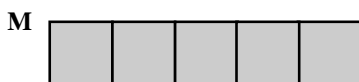
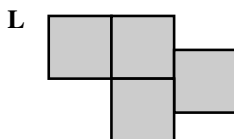
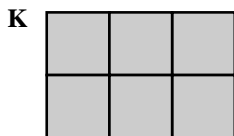
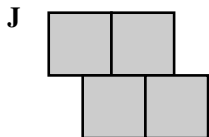
3 Which number should follow 11 in the following sequence:

23, 20, 17, 14, 11, ___?

- A 7
- B 8
- C 9
- D 10

Go On

4 Which of these has the greatest area?



5 Which of the following is correct?

- A $8 \times 3 = 12 + 2$
- B $8 \times 3 = 12 - 2$
- C $8 \times 3 = 12 \times 2$
- D $8 \times 3 = 12 \div 2$

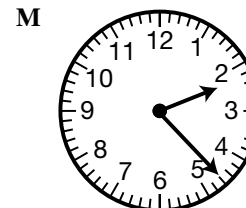
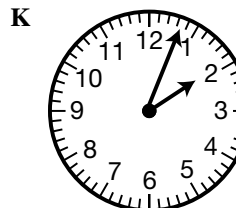
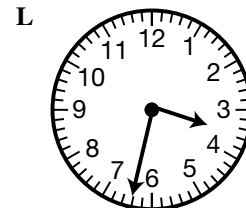
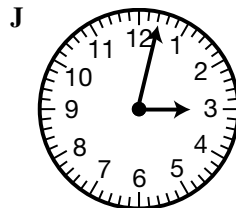
6 Which fraction is the greatest?

- J $\frac{1}{4}$
- K $\frac{1}{3}$
- L $\frac{2}{3}$
- M $\frac{1}{2}$

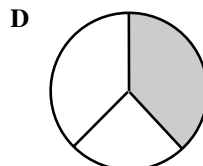
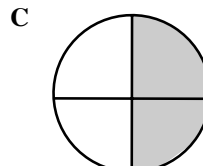
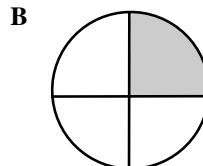
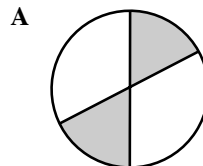
7 Which of these is equal to $2000 + 40 + 5$?

- A 245
- B 2045
- C 2405
- D 2450

8 Which clock is showing 2 minutes after 3 o'clock?



9 Which of the following circles is $\frac{1}{2}$ shaded?



10 Which of these numbers does not have 6 as a factor?

- J 54
- K 42
- L 36
- M 16

Go On

11 Jimmy has 7 green marbles and 4 blue marbles. Joey has 11 green marbles and 8 blue marbles. **Which number sentence shows the total number of blue marbles Jimmy and Joey have?**

- A $7 + 4 = 11$
- B $11 + 8 = 19$
- C $7 + 11 = 18$
- D $4 + 8 = 12$

12 Which of the following number sentences is correct?

- J $17 > 34 + 17$
- K $47 > 34 + 17$
- L $51 > 34 + 17$
- M $52 > 34 + 17$

13 Which of the following are numbers that are all multiples of 5?

- A 20, 25, 30, 35, 40
- B 21, 28, 35, 42
- C 16, 18, 20, 22, 24
- D 5, 9, 13, 17, 21

14 What is the missing addend in the number sentence below?

$$15 = 7 + 3 + \square$$

- J 5
- K 10
- L 15
- M 20

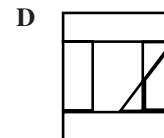
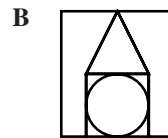
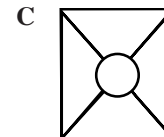
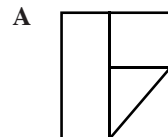
15 2 liters is most likely the amount of liquid in a _____.

- A large bottle of soda
- B bathtub
- C pond
- D swimming pool

16 19,991 is _____.

- J 9 less than 20,000
- K 9 more than 20,000
- L 19 less than 20,101
- M 19 more than 20,101

17 Which of these puzzles includes this piece?



18 Which is the best unit to use for measuring the height of the Statue of Liberty?

- J Grams
- K Miles
- L Ounces
- M Feet

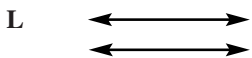
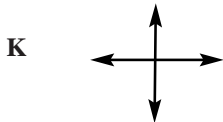
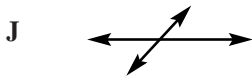
19 In the number sentence below, what is the missing factor?

$$5 \times \square = 35$$

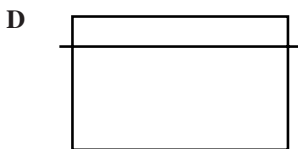
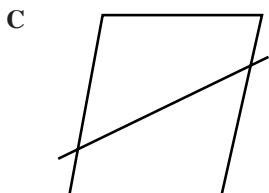
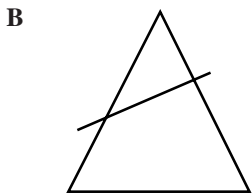
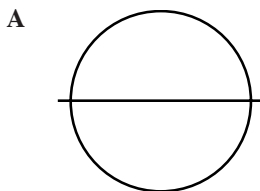
- A 7
- B 30
- C 40
- D 175

Go On

20 Which one of these figures shows parallel lines?



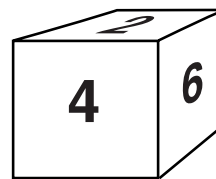
21 Which of these figures has a line of symmetry drawn through it?



22 Twelve thousand forty one is the same as _____.

- J 120,041
- K 120,401
- L 12,401
- M 12,041

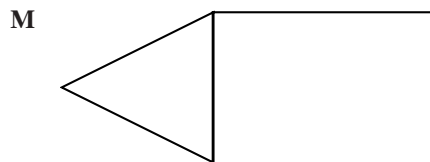
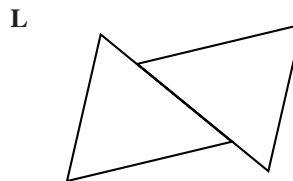
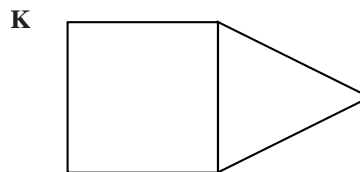
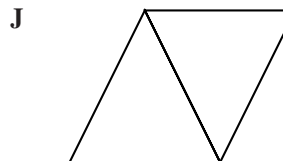
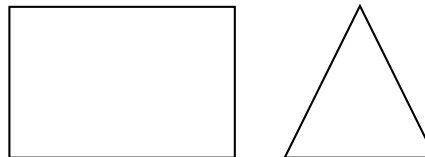
23 The probability of tossing a 4 on the number cube shown is $\frac{1}{6}$.



This means that if you toss the number cube:

- A You will always get a 4.
- B You should expect to get a 4 roughly 1 out of 6 times.
- C If you toss the number cube six times you should expect to get a number greater than 4 only once.
- D If you toss the number cube 5 times, you will never get a 4.

24 Which figure has been formed from the two shapes below?



Part 2: Math Estimation

Directions:

This is a test of your skill in estimating answers to math problems.

Four possible answers are given for each problem. Estimate the answer to each problem in your head. **No scratch work is allowed.**

Choose the answer that is the best estimate of the exact answer. Do not spend too much time on any one problem, or you will not finish all the problems.

Remember, estimate. Do not try to compute exact answers.

The samples on this page show you what the problems are like and how to mark your answers.

SAMPLE

S1 The closest estimate of $27 + 42$ is

A 50

B 60

C 70

D 80

ANSWERS

S1 **A** **B** **C** **D**

($27 + 42$ is about the same as $30 + 40$, which is 70.)

S2 The product 29×9 is between

J 50 and 100

K 100 and 150

L 150 and 250

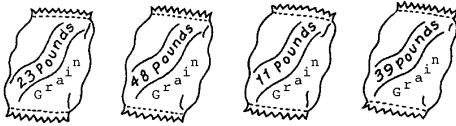
M 250 and 300

S2 **J** **K** **L** **M**

(29×9 is a little less than 30×10 , which is 300. So the answer is between 250 and 300.)

Go On

25



Which is the closest estimate of how much grain there is all together?

- A 100 pounds
- B 120 pounds
- C 140 pounds
- D 150 pounds

26 The sum $58 + 29$ is ____.

- J less than 80
- K between 80 and 90
- L between 90 and 100
- M more than 100

27



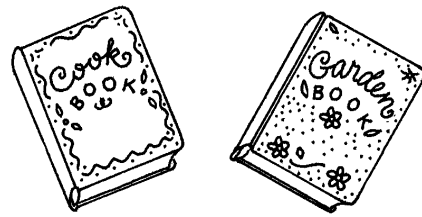
The amount it costs to subscribe to the magazine for 4 years is ____.

- A between \$50 and \$100
- B between \$100 and \$150
- C between \$150 and \$200
- D between \$250 and \$300

28 What is the closest estimate of $\$7.24 - \3.97 ?

- J \$4
- K \$3
- L \$2
- M \$1

29



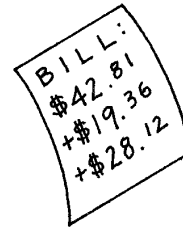
194 pages

279 pages

What is the closest estimate of how many more pages the cookbook has than the gardening book?

- A $300 - 100$
- B $300 - 200$
- C $400 - 200$
- D $200 - 200$

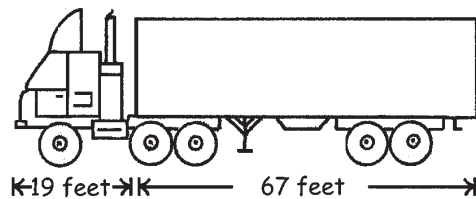
30



Which shows the best estimate of the total amount of the bill?

- J less than \$80.00
- K between \$80.00 and \$100.00
- L between \$100.00 and \$120.00
- M more than \$120.00

31



What is the closest estimate of how much longer the back of the truck is than the front?

- A 50 feet
- B 60 feet
- C 70 feet
- D 90 feet

Go On

32 What is the closest estimate of $662 - 409$?

- J 2
- K 25
- L 250
- M 2500

33



Which is the closest estimate of the total number of marbles in all three bowls?

- A 20
- B 30
- C 50
- D 60

34 The difference $752 - 149$ is ____.

- J less than 500
- K more than 650
- L between 600 and 650
- M between 650 and 700

35 The product 6×294 is _____.

- A less than 1200
- B between 1200 and 1500
- C between 1500 and 1800
- D between 1800 and 1900

36 What is the closest estimate of 52×21 ?

- J 1
- K 10
- L 100
- M 1000

37



Oak Tree HEIGHT: 247 feet Maple Tree HEIGHT: 282 feet

What is the closest estimation of how much taller the maple tree is than the oak tree?

- A 10 feet
- B 20 feet
- C 30 feet
- D 50 feet

38 What is the closest estimate of $52,978 \div 11$?

- J 5
- K 50
- L 500
- M 5000

39 The closest estimate of $289 \div 50$ is _____.

- A 5
- B 6
- C 7
- D 8

40 What is the closest estimate of $\$12.07 + \9.89 ?

- J \$10
- K \$20
- L \$30
- M \$40



Math Problem Solving and Data Interpretation

Part 1: Math Problem Solving

Directions:

This is a test of your skill in solving math problems.

Work each problem and compare your answer with the possible answers given.

For some problems, four answers are given. You should choose the answer you think is better than the others.

For some other problems, there are three possible answers and a 'Not given'—meaning that the correct answer is not given. For these kinds of problems, if the correct answer is not given, you should fill in the last answer space.

The samples on this page show you what the problems are like and how to mark your answers.

SAMPLES

S1 Dawn and Ross looked for daisies in the yard. Dawn picked 2 daisies, and Ross picked 4. **How many daisies did they pick altogether?**

- A 4
- B 5
- C 6
- D Not given

ANSWERS:

S1 A B C D

S2 Jill's piano teacher told her to practice for 5 hours. After school, Jill practiced for 3 hours. **How many hours does she have left to practice?**

- J 2
- K 3
- L 8
- M Not given

S2 J K L M

S3 Kim planted 3 daisies, 2 roses, and 4 tulips. **How can she figure out how many more tulips she planted than daisies?**

- A Add 2 and 4
- B Subtract 3 from 4
- C Add 3, 2 and 4
- D Multiply 4 times 2

S3 A B C D

Go On

Directions: Use the information to answer questions 1 and 2.

TRAVEL DISTANCES BETWEEN TOWNS

	Adamsville	Maple Hill	San Pedro
Adamsville		25 miles	12 miles
Maple Hill	25 miles		30 miles
San Pedro	12 miles	30 miles	

1 How many miles is it from Maple Hill to San Pedro?

- A 12 miles
- B 25 miles
- C 30 miles
- D 37 miles

2 A salesman wants to travel from San Pedro to Adamsville, and then from Adamsville to Maple Hill. What will his total travel distance be?

- J 25 miles
- K 27 miles
- L 37 miles
- M 55 miles

3 Jenny, Brad, Kevin and Silvie are having a garage sale. Brad brought 14 shirts, 7 coats, and 3 hats to the garage sale. How many items did he bring in all?

- A 6
- B 24
- C 32
- D Not given

4 Jenny and Brad each brought 14 shirts to the garage sale. Kevin and Silvie each brought 9 shirts. What was the total number of shirts at the garage sale?

- J 23
- K 46
- L 56
- M Not given

5 The number of people who attended the sale on Tuesday was 16 more than the number of people who attended on Monday. If 20 people attended on Monday, how many people attended on Monday and Tuesday?

- A 16
- B 36
- C 56
- D Not given

6 Mr. Schreiner bought a lamp for \$12.00 and a shirt for \$4.50. If he paid with a \$20 bill, how much change should he get?

- J \$3.50
- K \$6.50
- L \$16.50
- M Not given

Go On

- 7 Each hat at the garage sale was sold for \$2.50. **What would you need to know to figure out how much money they made by selling hats?**
- A The number of hats sold
 - B The number of scarves sold with hats
 - C The price of the hats
 - D The number of scarves they had before the sale started and the number of scarves left

- 8 Mrs. Ortiz bought 4 shirts for \$9.00 each and 2 coats for \$15.00 each. **How much money did she spend altogether?**
- J \$24
 - K \$36
 - L \$51
 - M \$66

- 9 Shayna buys 4 pounds of turkey for \$6 a pound, and 2 loaves of bread for \$3 each for her family. **How much does Shayna spend on food for her family?**
- A \$15
 - B \$30
 - C \$32
 - D \$36

- 10 Shayna spent $\frac{1}{3}$ of her allowance on a book and $\frac{1}{2}$ of her allowance on a present for a friend. **If Shayna's allowance is \$6, how much did the book cost?**
- J \$1.00
 - K \$2.00
 - L \$3.00
 - M \$4.00

Go On

DIRECTIONS: Use the information and the picture below to answer questions 11–16

Carly, Letitia, and Juan gathered autumn fruits and vegetables. Each child gathered a bag of apples, a bag of pumpkins, and a bag of corn cobs. The picture shows the results of Saturday's gathering.



- 11** How many more apples than pumpkins did Juan gather?
- A 2
B 5
C 6
D Not given
- 12** A fourth child, Kendra, gathered 4 more apples than Carly, Letitia, and Juan gathered on Saturday altogether. Which is the best way to figure out how many apples Kendra gathered?
- J $7 + 9 + 11 + 4$
K $12 + 14 + 17 + 4$
L $(7 + 4) + (9 + 4) + (11 + 4)$
M $(12 + 4) + (14 + 4) + (17 + 4)$
- 13** How many total fruits and vegetables did Letitia gather?
- A 43
B 41
C 45
D Not given
- 14** What was the average number of pumpkins gathered by the three children?
- J 9
K 10
L 17
M 27
- 15** The next day, Juan used 9 of his apples to make apple pies. How many apples did he have left after making the pies?
- A 6
B 7
C 8
D 9
- 16** Which is the best way to figure out how many more corn cobs Letitia gathered than Carly?
- J $18 - 13$
K $14 - 12$
L $18 - 14$
M $14 + 13$



Part 2: Data Interpretation

Directions:

This is a test of your ability to get and use information from graphs and tables.

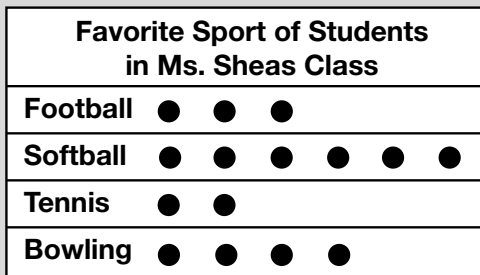
Four answers are given for each problem. You are to choose the answer that you think is better than the others.

Then, on your answer sheet, find the row of answer spaces numbered the same as the question. Fill in the answer space for the best answer.

The samples on this page show you what the problems are like and how to mark your answers.

SAMPLES

Use this graph to answer questions S1 and S2.



Each ● stands for one student

S1 How many students like football best?

- A 2 B 3 C 4 D 6

S2 Which sport is the favorite of the most students?

- J Tennis L Football
K Softball M Bowling

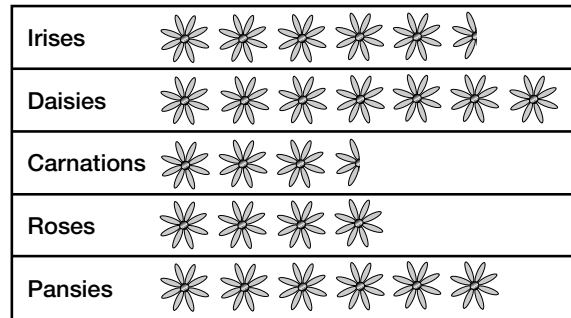
ANSWERS

S1 (A) ● (C) (D)

S2 (J) ● (L) (M)

Directions: Use the graph below to answer questions 17–19.

Flower Sales on Wednesday



One  represents 10 flowers

17 How many more sunflowers were sold than roses?

- A 26
B 260
C 2600
D This information cannot be obtained from this graph.

18 Half as many carnations were sold as which type of flower?

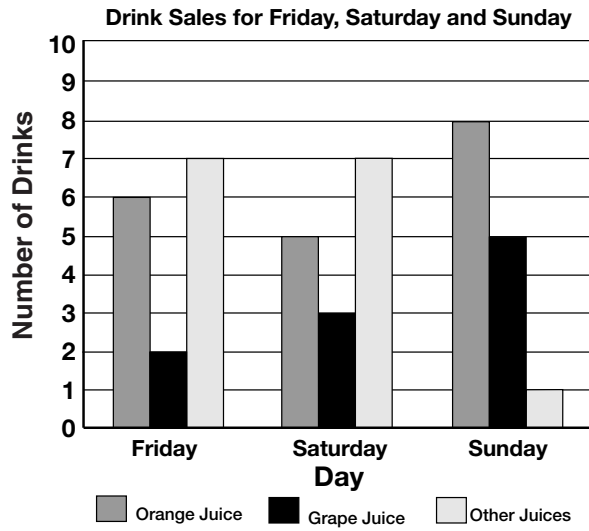
- J Irises
K Roses
L Pansies
M Daisies

19 How many irises were sold?

- A $5\frac{1}{2}$
B 55
C 550
D 5500

Go On

Directions: Use the graph below to answer questions 20–23.



20 How many fewer orange juice drinks were sold on Friday than on Sunday?

- J 2
- K 3
- L 6
- M 8

21 How many drinks were sold on Sunday?

- A 8
- B 14
- C 15
- D 16

22 How many grape juice drinks were sold on Friday, Saturday, and Sunday?

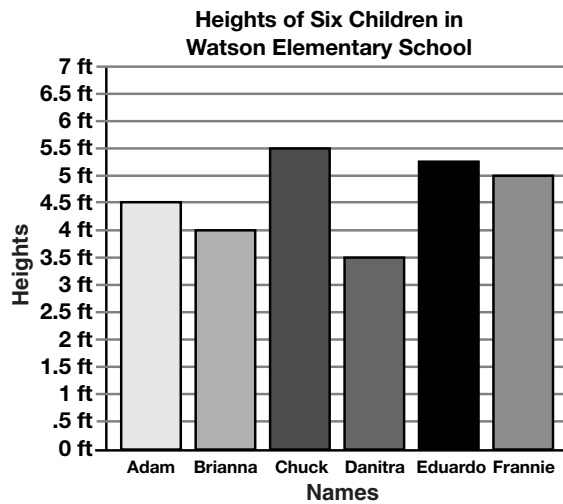
- J 8
- K 10
- L 11
- M 15

23 According to the information presented in the graph, which of these statements can be made about apple juice?

- A More apple juice drinks were bought than orange juice drinks.
- B More orange juice drinks were bought than apple juice drinks.
- C Apple juice drinks sold the least.
- D No one bought apple juice drinks.

Go On

Directions: Use the graph below to answer questions 24–27.



- 24** A seventh child, Tim, is taller than Brianna but shorter than Chuck. **How tall could Tim be?**
- J** 6 feet tall
 - K** 5.5 feet tall
 - L** 5 feet tall
 - M** 3.5 feet tall

- 25** How many children are taller than 4 feet?
- A** 4
 - B** 3
 - C** 2
 - D** 1

- 26** Danitra is the shortest person in school, and the tallest person in school is 2 feet taller than Danitra. **How tall is the tallest person in school?**
- J** 6 feet tall
 - K** 5.5 feet tall
 - L** 4.5 feet tall
 - M** 4 feet tall

- 27** Which child's height is greater than 5 feet but less than 5.5 feet?
- A** Brianna
 - B** Danitra
 - C** Eduardo
 - D** Frannie



Math Computation

Directions:

This is a test of math computation.

After each problem are three answers and an “N” meaning that the correct answer is not given.

Work each problem and compare your answer with the answers that are given.

If your answer matches a given answer, fill in the answer space on your answer sheet that has the same letter as that answer.

If your answer is not given, fill in the last answer space.

The samples on this page show you what the problems are like and how to mark your answers.

SAMPLES

S1	$\begin{array}{r} 7 \\ - 2 \\ \hline \end{array}$	A 4
		B 5
		C 9
		D N

S2	$4 \times 3 =$	J 7
		K 9
		L 12
		M N

ANSWERS

S1	<input type="radio"/> A	<input checked="" type="radio"/>	<input type="radio"/> C	<input type="radio"/> D
S2	<input type="radio"/> J	<input type="radio"/> K	<input checked="" type="radio"/>	<input type="radio"/> M

1	$457 + 78 =$	A 535
		B 635
		C 653
		D N

2	$81 - 53 =$	J 28
		K 36
		L 38
		M N

3	$146 \div 6 =$	A 22 R2
		B 24 R2
		C 876 R2
		D N

4	$437 + 56$	J 483
		K 493
		L 503
		M N

5	$7 \overline{)42}$	A 5
		B 6
		C 7
		D N

6	$\begin{array}{r} 374 \\ 68 \\ + 4 \\ \hline \end{array}$	J 446
		K 466
		L 946
		M N

Go On

- 7 $24 + 7 + 39 + 41 =$ **A** 111
 B 121
 C 211
 D N

- 8
$$\begin{array}{r} 2306 \\ - 1954 \\ \hline \end{array}$$
 J 372
 K 432
 L 1352
 M N

- 9
$$\begin{array}{r} 200 \\ \times 44 \\ \hline \end{array}$$
 A 880
 B 8800
 C 20,044
 D N

- 10 $69 \times 6 =$ **J** 75
 K 304
 L 414
 M N

- 11 $8 \times 400 =$ **A** 32
 B 320
 C 3200
 D N

- 12 $2300 \times 7 =$ **J** 1610
 K 16,001
 L 16,100
 M N

- 13 $80 \div 5 =$ **A** 15 R1
 B 16
 C 16 R1
 D N

- 14 $182 \div 13 =$ **J** 13 R1
 K 14
 L 169
 M N

- 15 $366 \times 6 =$ **A** 372
 B 1896
 C 2196
 D N

- 16 $435 - 90 =$ **J** 305
 K 33
 L 345
 M N

- 17 $60 + 30 =$ **A** 90
 B 180
 C 1800
 D N

- 18 $656 + 140 =$ **J** 786
 K 796
 L 896
 M N

Go On

- 19 $10 \times 47 =$
- A 57
 - B 407
 - C 470
 - D N

- 20 $856 - 65 =$
- J 791
 - K 801
 - L 921
 - M N

- 21
$$\begin{array}{r} 715 \\ \times 4 \\ \hline \end{array}$$
- A 2460
 - B 2480
 - C 2840
 - D N

- 22
$$\begin{array}{r} 52 \\ \times 4 \\ \hline \end{array}$$
- J 56
 - K 178
 - L 208
 - M N

- 23 $275 \div 5 =$
- A 57 R2
 - B 270
 - C 280
 - D N

- 24 $978 \div 3 =$
- J 326
 - K 356
 - L 386
 - M N

- 25 $303 \times 3 =$
- A 99
 - B 609
 - C 999
 - D N

- 26
$$\begin{array}{r} 16 \\ 38 \\ + 52 \\ \hline \end{array}$$
- J 96
 - K 106
 - L 116
 - M N

- 27
$$\begin{array}{r} 694 \\ + 419 \\ \hline \end{array}$$
- A 1113
 - B 1123
 - C 1223
 - D N

- 28 $662 - 473 =$
- J 189
 - K 199
 - L 1135
 - M N

- 29 $612 - 87 =$
- A 525
 - B 535
 - C 625
 - D N

- 30 $36 \div 9 =$
- J 4
 - K 5
 - L 45
 - M N

Go On

- 31 $107 + 455 =$
- A 552
 - B 572
 - C 602
 - D N

- 32 $7659 - 2113 =$
- J 5446
 - K 5536
 - L 5546
 - M N

- 33
$$\begin{array}{r} 70 \\ - 16 \\ \hline \end{array}$$
- A 44
 - B 54
 - C 64
 - D N

- 34 $84 - 22 =$
- J 64
 - K 62
 - L 58
 - M N

- 35 $4\overline{)76}$
- A 19
 - B 72
 - C 80
 - D N

- 36
$$\begin{array}{r} 89 \\ \times 6 \\ \hline \end{array}$$
- J 95
 - K 534
 - L 554
 - M N

- 37 $1656 \div 8 =$
- A 27
 - B 207
 - C 2007
 - D N



ITBS Grade 4 Answer Sheet

Mathematics: Concepts and Estimation

- 1 A B C D
- 2 J K L M
- 3 A B C D
- 4 J K L M
- 5 A B C D
- 6 J K L M
- 7 A B C D
- 8 J K L M
- 9 A B C D
- 10 J K L M
- 11 A B C D
- 12 J K L M
- 13 A B C D
- 14 J K L M
- 15 A B C D
- 16 J K L M
- 17 A B C D
- 18 J K L M
- 19 A B C D
- 20 J K L M

- 21 A B C D
- 22 J K L M
- 23 A B C D
- 24 J K L M
- 25 A B C D
- 26 J K L M
- 27 A B C D
- 28 J K L M
- 29 A B C D
- 30 J K L M
- 31 A B C D
- 32 J K L M
- 33 A B C D
- 34 J K L M
- 35 A B C D
- 36 J K L M
- 37 A B C D
- 38 J K L M
- 39 A B C D
- 40 J K L M

Math Problem Solving

- 1 A B C D
- 2 J K L M
- 3 A B C D
- 4 J K L M
- 5 A B C D
- 6 J K L M
- 7 A B C D
- 8 J K L M
- 9 A B C D
- 10 J K L M
- 11 A B C D
- 12 J K L M
- 13 A B C D
- 14 J K L M
- 15 A B C D
- 16 J K L M

ITBS Grade 4 Answer Sheet

Data Interpretation

- 17 (A) (B) (C) (D)
18 (J) (K) (L) (M)
19 (A) (B) (C) (D)
20 (J) (K) (L) (M)
21 (A) (B) (C) (D)
22 (J) (K) (L) (M)
23 (A) (B) (C) (D)
24 (J) (K) (L) (M)
25 (A) (B) (C) (D)
26 (J) (K) (L) (M)
27 (A) (B) (C) (D)

Mathematics Computation

- 1 (A) (B) (C) (D)
2 (J) (K) (L) (M)
3 (A) (B) (C) (D)
4 (J) (K) (L) (M)
5 (A) (B) (C) (D)
6 (J) (K) (L) (M)
7 (A) (B) (C) (D)
8 (J) (K) (L) (M)
9 (A) (B) (C) (D)
10 (J) (K) (L) (M)
11 (A) (B) (C) (D)
12 (J) (K) (L) (M)
13 (A) (B) (C) (D)
14 (J) (K) (L) (M)
15 (A) (B) (C) (D)
16 (J) (K) (L) (M)
17 (A) (B) (C) (D)
18 (J) (K) (L) (M)
19 (A) (B) (C) (D)
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21 (A) (B) (C) (D)
22 (J) (K) (L) (M)
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26 (J) (K) (L) (M)
27 (A) (B) (C) (D)
28 (J) (K) (L) (M)
29 (A) (B) (C) (D)
30 (J) (K) (L) (M)
31 (A) (B) (C) (D)
32 (J) (K) (L) (M)
33 (A) (B) (C) (D)
34 (J) (K) (L) (M)
35 (A) (B) (C) (D)
36 (J) (K) (L) (M)
37 (A) (B) (C) (D)